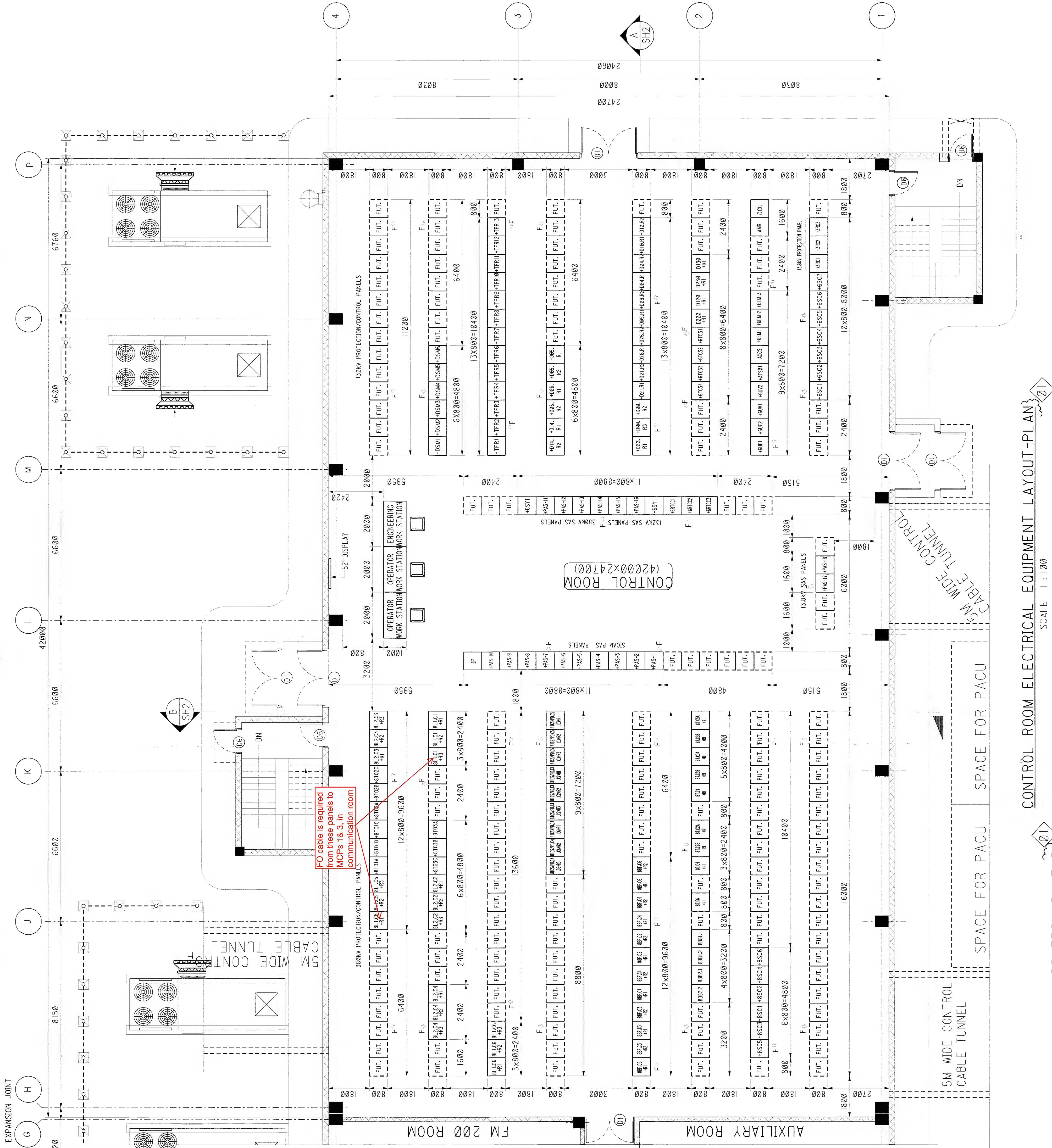


PROTECTION PANELS

SERIAL NO.	DESCRIPTION	NO. OF PANELS
1	380KV OHL FEEDER PROTN PANEL - BSP# 9027 T0 S/S 9023 SET 1/2, = BL1C5+R1,R2,R3	3
2	380V/132/13.8KV SGT-1 PROTN PANEL - SET 1/2+LV, +8T01A/B/C	3
3	380V/132/13.8KV SGT-2 PROTN PANEL - SET 1/2+LV, +8T02A/B/C	3
4	380KV OHL FEEDER PROTN PANEL - BSP# 9027 T0 S/S 9017A SET 1/2, = BL2C3+R1,R2,R3	3
5	380KV OHL FEEDER PROTN PANEL - BSP# 9027 T0 S/S 9015A SET 1/2, = BL1C1+R1,R2,R3	3
6	380V/132/13.8KV SGT-3 PROTN PANEL - SET 1/2+LV, +8T03A/B/C	3
7	380KV OHL FEEDER PROTN PANEL - BSP# 9027 T0 S/S 9013 SET 1/2, = BL2C2+R1,R2,R3	3
8	380KV OHL FEEDER PROTN PANEL - BSP# 9027 T0 S/S 9017A SET 1/2, = BL2C3+R1,R2,R3	3
9	380KV OHL FEEDER PROTN PANEL - BSP# 9027 T0 S/S 9017B SET 1/2, = BL1C6+R1,R2,R3	3
10	380KV TCS/PD2 PROTN PANEL -8TCS/PD,C5,C3+R1,R2,R3	3
11	380KV TCS/PD2 PROTN PANEL -8TCS/PD,C1,C2+R1,R2,R3	3
12	380KV TCS/PD2 PROTN PANEL -8TCS/PD,C4,C6+R1,R2,R3	3
13	380KV CBF PROTN PANEL = 8BF.C5+R1/R2	2
14	380KV CBF PROTN PANEL = 8BF.C3+R1/R2	2
15	380KV CBF PROTN PANEL = 8BF.C1+R1/R2	2
16	380KV CBF PROTN PANEL = 8BF.C2+R1/R2	2
17	380KV CBF PROTN PANEL = 8BF.C4+R1/R2	2
18	380KV CBF PROTN PANEL = 8BF.C6+R1/R2	2
19	380KV TEE PROTN PANEL = 8T.C5A+R1	1
20	380KV TEE PROTN PANEL = 8T.C5B+R1	1
21	380KV TEE PROTN PANEL = 8T.C3A+R1	1
22	380KV TEE PROTN PANEL = 8T.C3B+R1	1
23	380KV TEE PROTN PANEL = 8T.C1+R1	1
24	380KV TEE PROTN PANEL = 8T.C2A+R1	1
25	380KV TEE PROTN PANEL = 8T.C2B+R1	1
26	380KV TEE PROTN PANEL = 8T.C4+R1	1
27	380KV TEE PROTN PANEL = 8T.C6+R1	1
28	380KV BB PROTN PANEL SET 1 - BUS 1A, 2A, 2B, +8BB1,1/1,2	2
29	380KV BB PROTN PANEL SET 2 - BUS 1A, 1B, 2A, 2B, +8BB2,1,2,2	2
30	132KV INCOMER-1 PROTN PANEL,SGT-1,D06+R1/R2	2
31	132KV INCOMER-2 PROTN PANEL,SGT-2,D06+R1/R2	2
32	132KV INCOMER-3 PROTN PANEL,SGT-3,D04+R1/R2	2
33	132KV REACTOR-1 PROTN PANEL - SET 1/2,-D02+R1/R2	2
34	132KV REACTOR-2 PROTN PANEL - SET 1/2,-D06+R1/R2	2
35	132V/13.8KV TRFO GT-1 PROTN PANEL - SET 1/2,-D09+R1/R2	2
36	132V/13.8KV TRFO GT-2 PROTN PANEL - SET 1/2,-D04+R1/R2	2
37	132V/13.8KV TRFO GT-3 PROTN PANEL - SET 1/2,-D08+R1/R2	2
38	132KV BUS COUPLER-A PROTN PANEL,-D030+R1	1
39	132KV BUS COUPLER-B PROTN PANEL,-D0230+R1	1
40	132KV BUS SECTION PROTN PANEL,-D020+R1	1
41	132KV BUS SECTION PROTN PANEL,-D0220+R1	1
42	132KV TCS PROTN PANEL-SPARE FEEDERS, +6TCS1...4	4
43	132KV BUSBAR PROTECTION PANEL DISCR.ZONE -D080+R1/R3	2
44	132KV BUSBAR PROTECTION PANEL DISCR.ZONE -D080+R2	1
45	13.8KV CAPACITOR BANK-1 PROTN PANEL, +3RC1	1
46	13.8KV CAPACITOR BANK-2 PROTN PANEL, +3RC2	1
47	13.8KV CAPACITOR BANK-3 PROTN PANEL, +3RC3	1



CONTROL ROOM ELECTRICAL EQUIPMENT LAYOUT-PLAN

SCALE 1 : 100

CONTROL PANELS

SERIAL NO.	DESCRIPTION	NO. OF PANELS
1	380KV MANUAL CHECK SYNC-RELAY PANEL +8SCI,6 (3CB PER PANEL ARRANGEMENT)	6
2	380KV SYSTEM SYNCHRONISER PANEL +8SY1 (3CB PER PANEL ARRANGEMENT)	1
3	132KV MANUAL CHECK SYNC-RELAY PANEL +6SCI,7 (3CB PER PANEL ARRANGEMENT)	7
4	132V/13.8KV TRANSFORMER-1 +6RTCC1 PANEL	1
5	132V/13.8KV TRANSFORMER-2 +6RTCC2 PANEL	1
6	132V/13.8KV TRANSFORMER-3 +6RTCC3 PANEL	1
7	132KV ENERGY METERING PANEL +6EM,3	3
8	13.8KV UNDERFREQUENCY PROTECTION PANEL +6UFI,2	2
9	13.8KV UNDERVOLTAGE PROTECTION PANEL +6UVI,2	2
10	132KV SYSTEM SYNCHRONISER PANEL +6SY1	1
11	AUTOMATIC BUS TRANSFER SCHEME +ATS01	1
12	13.8KV ACCS PANEL	1
13	AMR PANEL AMR	1
14	DATA COLLECTION UNIT PANEL DCU	1
15	INVERTER PANEL IP	1
16	DSM PANELS +DSM,1,6	1
17	TR PANELS +TR,1,13	1

SAS PANELS

SERIAL NO.	DESCRIPTION	NO. OF PANELS
1	SICAM PAS PANELS (+PAS-1 TO +PAS-10)	10
2	380KV NETWORK SWITCHES (+PAS-11 TO +PAS-14)	4
3	132KV NETWORK SWITCHES (+PAS-15 TO +PAS-16)	2
4	13.8KV NETWORK SWITCHES (+PAS-17 )	1
5	GENERAL ALARMS PANEL (+PAS-18)	1

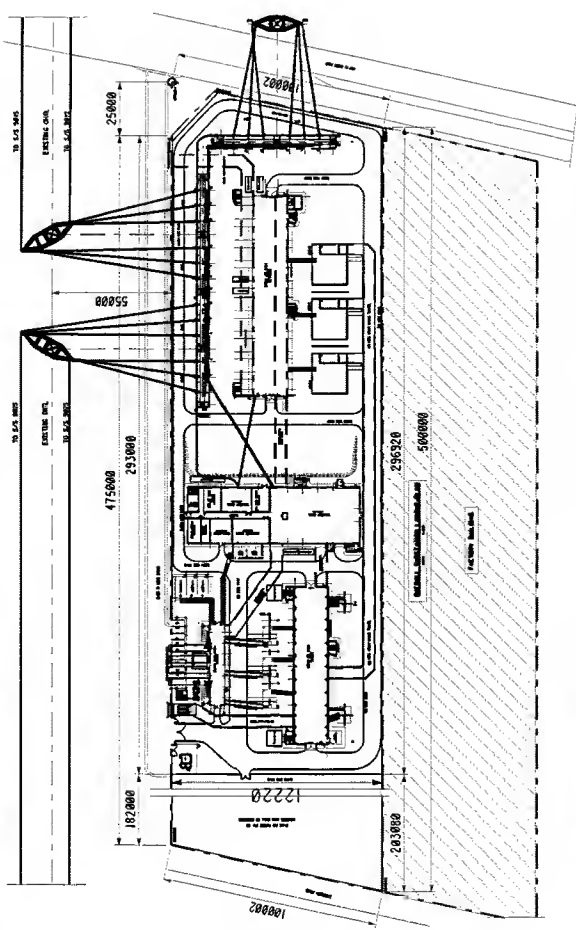
NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
2. EQUIPMENT SHOWN IN DOTTED IS FOR FUTURE REQUIREMENT.
3. COLUMNS SHOWN ARE INDICATIVE. FINAL COLUMN LOCATION AND SIZE SHALL BE AS PER CIVIL DRAWINGS.

LEGEND

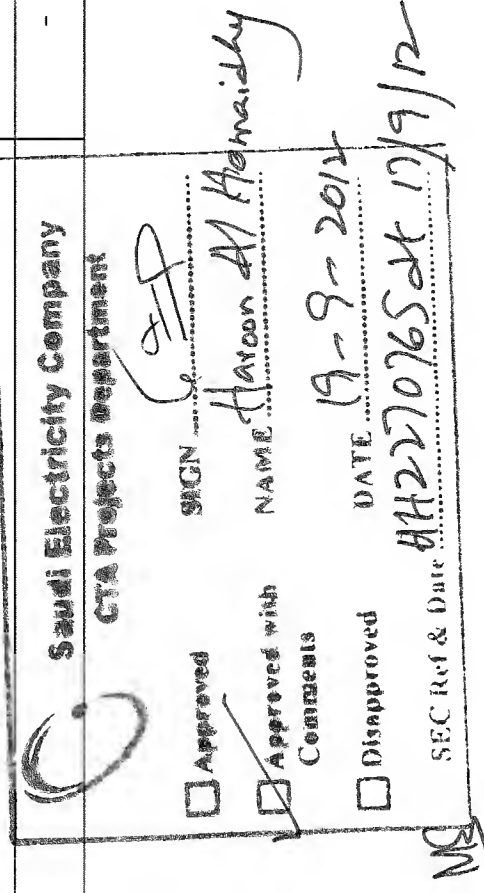
- FFL - FINISH FLOOR LEVEL
- FUT. - FUTURE PANELS
- F<sub>1</sub> - PANEL FRONT

KEY PLAN



REFERENCE DRAWINGS

DRAWING NO.	DRAWING TITLE
CE-177751	DRAWING CONTROL SHEET
PIS-090312	SCOPE OF WORK & TECHNICAL SPECIFICATIONS
CA-181001	SUBSTATION OVERALL LAYOUT PLAN
CA-181006	CONTROL BUILDING ELECTRICAL EQUIPMENT LAYOUT PLAN



AS-BUILT BY DATE

REV.	DATE	BY	DESCRIPTION
02	06-08-12	DAR	REVISED AS PER SEC LETTER NO. 12/14/2012
01	13-02-12	DAR	REVISED AS PER SEC LETTER NO. 12/14/2012 DATED 2/10/12
00	25-12-11	DAR	ISSUED FOR APPROVAL
REV.	DATE	BY	DESCRIPTION



DRAWN BY: N. ROUF	CHECKED BY: S.H	SCALE: 1:1000
DATE STARTED: 23-12-2011	DATE COMPLETED:	
OPRG. DEPT:	ENG. DEPT:	

THIS DRAWING IS NOT TO BE USED FOR APPROVAL/CERTIFICATION INFORMATION  
CONSTRUCTION OR FOR ORDERING MATERIAL UNLESS CERTIFIED AND DATED

CONTROL ROOM ELECTRICAL EQUIPMENT  
LAYOUT-PLAN & SECTIONS

CONSTRUCTION OF NEW 380V/132V/13.8KV INDUSTRIAL AREA BSP#9027  
SAUDI ARABIA

CONTRACT NO.	INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.	REV. NO.
1-1031018.01	P	C257	CA - 181107	01	02

SEC-A 12084/100

FM3 VECTOR